

**PATENT****IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of ) Confirmation No.: 7183  
ARTLEY et al. ) Examiner: Khan, Amina  
Serial No.: 10/022,959 ) Art Unit 1751  
Filed: December 18, 2001 ) Docket No.: T117 9001  
 ) Customer No.: 64278

For: **POLYETHYLENE GLYCOL SATURATED SUBSTRATE AND  
METHOD OF MAKING**

**DECLARATION UNDER 37 C.F.R. 1.132**

I, John W. Artley, of 4 Park Avenue, Apt. 10-R, New York, NY state the following as true:

1. I am one of the co-inventors of the claimed subject matter in the above-referenced application.
2. The present application relates to a method of manufacturing a polyethylene glycol treated fabric. The method includes exposing a fabric to a polyethylene glycol formulation having both an acid catalysis and a resin. The treated fabric is then heated and cured to initiate a catalytic reaction for bonding the polyethylene glycol formulation to the fabric. The bonded fabric is then neutralized to a pH of between 6.5 and about 7.5 and then dried. The neutralization step is critical given that an acid catalyst is used to initiate the PEG reaction and any remaining acid residue hydrolyzes causing a reversal of the PEG reaction.

3. I was the licensee of the three Vigo/Bruno patents (the "Patents," or "Technology") and the corresponding technology. I was granted the license from the United States Department of Commerce where both Dr. Vigo and Joe Bruno were employees of the United States Department of Agriculture Southern Regional Research Center. The licensed Vigo technology is equivalent to that taught in the cited Vigo Articles and Patents.

#### Vigo Protocol Followed

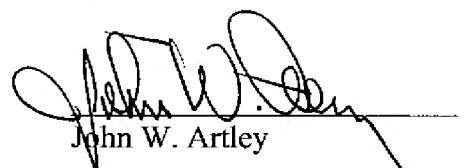
We followed the Vigo protocol, including the washing and rinsing the treated fabrics with a detergent as taught in the Vigo articles, in our first trials. Specifically, we followed the protocol as set forth on page 3 of the cited Vigo article titled, *Multipurpose woven cotton and cotton/polyester blends containing crosslinked polyols affixed by a low temperature cure*.

The trial included a 50/50 cellulosic/polyester fabric blend and a commercial grade poly(ethyleneglycol) having a average molecular weight of 1000 (PEG-1000). A solution of DMDHEU, PEG-1000 and the acid catalyst was prepared according to the above-cited Vigo article. The fabric was immersed in the solution in a saturation tank and then rolled with squeeze rollers. The fabric was then dried or cured at a temperature of about 100°C for about 5 to 10 minutes. The cured fabric was then washed in tap water containing a 1 wt. percent of a commercially available phosphate detergent and then dried in a commercial dryer.

#### pH of Vigo Treated Fabric and the Claimed Present Method

The pH of treated fabrics following the Vigo technology as set forth on page 3 of the cited Vigo article titled, *Multipurpose woven cotton and cotton/polyester blends containing crosslinked polyols affixed by a low temperature cure* and described herein above had a final pH of between about 5 and 5.5 after washing with detergent. Of course, as claimed by Applicants, the final pH of the treated fabric following the claimed method was in the range of between 6.5 and about 7.5 since the fabric was neutralized.

I hereby declare that all statements made herein are made of my own knowledge and are true and that all statements made on information and belief are believed to be true, and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of title 18 of the United States Code and that such willful and false statements may jeopardize the validity of the application or any patent issued there from.



John W. Artley  
May 16, 2007  
Date →